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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,859	02/19/2004	Lawrence A. Spracklen	SUNMP501	7656

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EXAMINER

TOLENTINO, RODERICK

ART UNIT	PAPER NUMBER
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2134

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/783,859	Applicant(s) SPRACKLEN, LAWRENCE A.	
	Examiner Roderick Tolentino	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/19/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 27 are pending.

Drawings

2. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 3, 7, 11 – 13, 20, 22 and 24 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. U.S. Patent No. (7,103,602) in view of Col et al. U.S. Patent No. (6,330,657).

5. As per claims 1, 7, 12, 17, 20 and 22, Black teaches a processor capable of executing a secure hash algorithm (SHA) (Black, Col. 2 Lines 14 – 30, processor that can compute SHA), but fails to teach a core having a first execution unit and a second execution unit, wherein the first execution unit is capable of processing a message and producing a partial result passed to the second execution unit, the partial result capable of being processed by the second execution unit in parallel with the processing of the

message by the first execution unit. However, in an analogous art Col teaches a core having a first execution unit and a second execution unit, wherein the first execution unit is capable of processing a message and producing a partial result passed to the second execution unit, the partial result capable of being processed by the second execution unit in parallel with the processing of the message by the first execution unit (Col, Col.14 Lines 1 – 20, parallel processing execution).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Col's pairing of microinstructions in the instruction queue with Black's system for data management, because it offers the advantage of being efficient in the execution of instructions (Col, Col. 1 Lines 43 – 50).

6. As per claims 2 and 23, Black as modified teaches wherein the first execution unit is a single instruction multiple data (SIMD) execution unit (Col, Col. 3 Lines 61 – 63).

7. As per claim 3, Black as modified teaches the second execution unit is an integer execution unit (Col, Col. 14 Lines 10 – 16).

8. As per claim 11, Black as modified teaches the partial result includes loosely coupled data capable of permitting parallel processing of the partial result in the first execution unit and the second execution unit (Col, Col.14 Lines 1 – 20, parallel processing execution).

9. As per claim 13, Black as modified teaches the cryptographic computation is further capable of performing a preprocessing operation (Col, Col. 20 Lines 45 – 54).

10. As per claim 24, Black as modified teaches the second execution unit includes at least one instruction execution unit capable of transferring data to the first execution unit (Col, Col. 9 Lines 26 – 38).

11. As per claim 25, Black as modified teaches including a first register file capable of transferring data (Col, Col. 9 Lines 26 – 38).

12. As per claim 26, Black as modified teaches including a second register file capable of transferring data (Col, Col. 9 Lines 26 – 38).

13. As per claim 27, Black as modified teaches including at least one instruction capable of transferring data between the first execution unit and the second execution unit (Col, Col. 9 Lines 26 – 38).

14. Claims 4, 5, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. U.S. Patent No. (7,103,602) and Col et al. U.S. Patent No. (6,330,657), as applied to claim 1 and in further view of Lilly U.S. Patent No. (6,829,355).

15. As per claim 4, Black fails to teach wherein the message is a parsed padded message. However, in an analogous art Lilly teaches the message is a parsed padded message (Lily, Col. 3 Lines 32 – 38).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Lilly's device for one-way hashing with Black's system for data management, because it offers the advantage of to maintain and improve security (Lilly, Col. 2 Lines 10 – 13).

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16. As per claim 5, Black as modified teaches the parsed padded message includes an original message and a plurality of pad bits, the original message being a plurality of bits (Lilly, Col. 3 Lines 32 – 38).

17. As per claim 8, Black fails to teach the first execution unit receives a plurality of blocks, the plurality of blocks including an original message and a plurality of pad bits. However, in an analogous art Lilly teaches the first execution unit receives a plurality of blocks, the plurality of blocks including an original message and a plurality of pad bits (Lilly, Col. 3 Lines 5 – 10).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Lilly's device for one-way hashing with Black's system for data management, because it offers the advantage of to maintain and improve security (Lilly, Col. 2 Lines 10 – 13).

18. As per claim 14, Black fails to teach the preprocessing operation includes padding the message, parsing a padded message and setting initial hash values. However, in an analogous art Lilly teaches the preprocessing operation includes padding the message, parsing a padded message and setting initial hash values (Lily, Col. 3 Lines 32 – 38).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Lilly's device for one-way hashing with Black's system for data management, because it offers the advantage of to maintain and improve security (Lilly, Col. 2 Lines 10 – 13).

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19. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. U.S. Patent No. (7,103,602) and Col et al. U.S. Patent No. (6,330,657) and in further view Tague et al. U.S. Patent No. (4,799,181).

20. As per claim 6, Black fails to teach the partial result includes a group of bits capable of being represented by a hexadecimal value. However, in an analogous art Tague teaches the partial result includes a group of bits capable of being represented by a hexadecimal value (Tague, Col. 1 Lines 52 – 57).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tague's BCD arithmetic using binary arithmetic and logical operations with Black's system for data management, because it offers the advantage of to being a more efficient way of processing data (Tague, Col. 1 Lines 25 – 29).

21. Claims 9, 10, 15, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. U.S. Patent No. (7,103,602), Col et al. U.S. Patent No. (6,330,657) and Lilly U.S. Patent No. (6,829,355), and in further view Gibson U.S. Patent No. (5,155,820).

22. As per claims 9 and 15, Black fails to teach message schedule computation includes a rotation operation capable of rotating the plurality of blocks. In an analogous art Gibson teaches message schedule computation includes a rotation operation capable of rotating the plurality of blocks (Gibson, Col. 9 Lines 7 – 27).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Gibson's instruction format with designation for operand lengths with Black's system for data management, because it offers the advantage of processing very fast while at a low cost (Gibson, Col. 3 Lines 23 – 28).

23. As per claims 10 and 16, Gibson fails to teach the second execution unit includes an addition function capable of adding the partial result (Gibson, Col. 4 Lines 64 – 65).

24. As per claim 21, Black fails to teach the instructions further rotate bits to produce the result. However, in an analogous art Gibson teaches the instructions further rotate bits to produce the result (Gibson, Col. 9 Lines 7 – 27).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Gibson's instruction format with designation for operand lengths with Black's system for data management, because it offers the advantage of processing very fast while at a low cost (Gibson, Col. 3 Lines 23 – 28).

25. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. U.S. Patent No. (7,103,602) and Col et al. U.S. Patent No. (6,330,657) and in further view Tague et al. U.S. Patent No. (4,799,181) and Gibson U.S. Patent No. (5,155,820).

26. As per claims 18 and 19, Black as modified fails to teach processing the block further includes rotating bits in the block, the bits in the block capable of being represented as a hexadecimal value. However, in analogous arts Tague teaches the bits in the block capable of being represented as a hexadecimal value (Tague, Col. 1

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Lines 52 – 57) and Gibson teaches processing the block further includes rotating bits in the block (Gibson, Col. 9 Lines 7 – 27).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tague's BCD arithmetic using binary arithmetic and logical operations with Black's system for data management, because it offers the advantage of to being a more efficient way of processing data (Tague, Col. 1 Lines 25 – 29).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Gibson's instruction format with designation for operand lengths with Black's system for data management, because it offers the advantage of processing very fast while at a low cost (Gibson, Col. 3 Lines 23 – 28).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roderick Tolentino whose telephone number is (571) 272-2661. The examiner can normally be reached on Monday - Friday 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RLT TLT
Roderick Tolentino

Roderick Tolentino
Examiner
Art Unit 2134

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SUPERVISORY PATENT EXAMINER
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[Signature]
7,18,07